President’s Message

Sharon Lehmann, MS, ACNS-BC
President

Welcome to the Association for Radiologic and Imaging Nursing, ARIN! On behalf of the Board of Directors I want to thank the members who took the time to send in their ballots and their comments concerning the bylaws.

Since the annual convention that was held March 15-20, 2008, in Washington, D.C. the Board of Directors has been reviewing the many comments that were submitted by the attendees.

The question that is most prominent in everyone’s mind seems to be “Why can’t the physicians, techs, and nurses all be in one place? The answer is simply space or lack thereof. SIR did not have all of the available space leased at the convention center (there was also a Home and Garden show taking place). In fact, they booked this space a few years ago and now find that their needs have changed and so many of their committee meetings spilled over into the hotels as well. Traditionally the combined nurse/tech day has been at the convention center, and yes, there was space for that this year. However, there was not enough space for the techs to continue to hold their meeting at the convention center, so the rest of their meeting was held at a hotel. As per the nurses’ usual routine, our meeting was also held at a hotel. Yes, the Hyatt was a nice place to be.

So where does that leave us for the 2009 Annual Convention, March 7-12, in San Diego? The set-up will basically be the same as this year’s. The SIR meetings, the exhibit hall, and registration will be at the convention center. The first day of the meeting, which I am counting as the joint nurse/tech day, will also be held at the convention center. The rest of the nurses’ meeting will again be held at the Hyatt, which is a 10-minute walk from the convention center (down three blocks and on the same side of the street). The techs will have their meeting at the Marriott, which is right next door to the Hyatt.

Kathy Scheffer (immediate past president) and Christy Lee (planning committee chair) were the nurse representatives, and Leslie Long and Anita Cornier were the staff members from the ARNA National Office who attended a site visit in San Diego with SIR and AVIR in May of this year. They have assured the Board that room sizes are more than adequate and that there will be plenty of seats for the Networking Luncheon. The National Office is working to arrange an optional dinner cruise that you could walk to. There are plenty of restaurants and some shopping within easy walking distance.

The Board of Directors would like to believe that you are attending the convention for the nursing content, but we can also respect the fact that the physician and tech topics are of great interest as well and just as relevant to your practice. Yes, being spread out may make your choices a bit more difficult as was expressed in the comments we received this year. The physical layout is how it is. Just for a point of reference, one contact hour or one CME is 60 minutes in length. For the CRN credential the contact hours should be ANCC-, CME-, ASRT-, or AVIR- approved. When you attend a SIR lecture, you’ll need to swipe your I.D. badge

(continued on page 2)
President’s Message  (continued from page 1)

when you enter the room, and you receive a certificate of credit after the conference.

The Planning Committee has built in extra-long breaks on some of the days so that you will have the time to visit the Exhibit Hall. Some of you found the vendors very “nurse friendly” and some did not. The Board of Directors encourages you to come prepared to speak with specific vendors that you might find are the most beneficial to your practice. Ask about their products, show them your interest and your knowledge, and explain to them that we are the nurses who do have influence. Yes many of them do have giveaways, but that should not be the primary reason to scope out the Exhibit Hall. Some of the vendors do provide us grants and sponsor some of our activities, and we should take the time to thank them for their support as well. Unfortunately, the ARNA booth was neglected in the Exhibit Hall this year, and I have been assured that this will be rectified for next year.

The Board of Directors cannot emphasize enough to you to read your program. We cannot guarantee that it will be 100% correct. The nurses’ opening reception is on Saturday evening, March 6. We hope to see all of you there. Some receptions are SIR-sponsored. Also, you may receive invitations to attend vendor-sponsored events. Some come in the mail, some come via e-mail, and some appear at your hotel door at the start of the conference. Don’t be afraid to talk to the person sitting next to you during a lecture, especially if you are here alone; that person may very well be alone as well.

The Board of Directors would just like to extend a huge thank you to the speakers who did provide handouts for their lectures. We challenge those of you who have submitted an abstract that has been accepted to do the same in return for next year. The members are coming to hear you speak, and when there is no handout, it is difficult to take notes and follow along with the lecture, especially if it is detailed subject matter. As well, when there are concurrent sessions and choices need to be made, at least they will have notes to read from if they could not attend your particular lecture. Also a big thank you to everyone who volunteered their time at the convention, any part big or small was greatly appreciated.

The Program Planning Committee split into two groups this year: one for the Fall Symposium to be held in St. Louis, October 4 and 5, 2008, and one for the Annual Convention in San Diego, March 7-12, 2009. By the time this issue of Vision arrives, you should have your Fall Symposium brochure in hand. Speaking of how things should arrive “on your doorstep” – within the next year, we are hoping to move to electronic delivery for Vision, convention brochures, election ballots, etc. Many nursing organizations have already taken this plunge, and this is one way that we can trim the budget. Currently, you can download issues of Vision from the website. There was one individual who kept “looking for her conference brochure in the mail.” I know it was available on the Web and e-mail broadcasts were sent out long before it hit my mailbox. But most importantly, official news and business of the organization can be provided in a more efficient manner to better serve you, the membership.

The Board of Directors has been busy assigning liaison roles to attend various meetings that ARIN has been asked to attend this year. In an effort to be cost conscious, we are trying to match member interests with where a meeting might be. Joanna Po continues as the liaison to the American Radiological Hospital Administrators (AHRA). She will attend their annual meeting in July, advancing ARIN’s core purpose and values, and promoting all of our recently published and updated educational materials.

Earlier this year I had been grappling with some professional issues that I thought were bringing about a negative impact on my personal life. Then as if I needed an answer, I heard about a concept on the radio that was also in book format, so I ordered it. The book is A Complaint Free World: How to Stop Complaining and Start Enjoying the Life You Always Wanted by Will Bowen and published by Doubleday. This organization has a purple bracelet for you to wear and a 21-day challenge to “transform” yourself if you will. I wore a rubber band (less conspicuous). Every time you complain, you move it to the other wrist. The end point of the book and the “lesson” is to take a good look at yourself, your behaviors, what comes out of your mouth and think about how to reform old habits. Not that I thought of myself as a complainer, but it did give me food for thought and has given me great pause and a few ahas. On a lighter note, I hope everyone is having a safe and relaxing summer.

P.S. As promised I am studying for the CRN exam.
From the ARNA Board

The ARNA/ARIN Board of Directors met twice in Washington, D.C., on March 14 and March 20, 2008. We have also held monthly conference calls.

Election results:
Karen Green, MHA, BSN, RN, CRN, President-Elect
Linda McDonald, BSN, RN, CRN, Treasurer
Brenda Wickersham, MAV, RN, CRN, Board Member, (three year)
Mag Browne McManus, BAHS, RN, Board Member, appointed by the Board to serve the remaining one-year term vacated by Karen Green

Thank you to outgoing Board Members:
Patrick Glickman, BSN, RN, CRN, Past-President
Diana Denz, BSN, RN, CRN, Treasurer
Virginia Girard, BSN, RN, CRN, Board Member

- Approved St. Louis as the location for the Fall Symposium
- Approved the Budget for 2008-09
- Appointed Carol Fortier, BSN, RN, CRN, to the position of Chapter Committee Chair
- Finalized ARNA’s Strategic Plan (This will be posted on the website for the membership to review.)
- Revisited the bylaws for approval of the name change
- Reviewed and revised all policies and procedures
- Granted lifetime membership to all past presidents
- Personally informed all past-presidents of the name change (Two past presidents were able to join us at the Annual Convention; the others were notified by mail.)
- Developed a timeline for the Nominations Committee to follow to ensure timeliness of the election process
- Developed a timeline for the Awards Task Force to follow, developing promotions for the awards and timeliness of the award process
- Developing a Liaison job description
- ARIN will have a official booth at RSNA to promote our name change.
- The Orientation Manual is now available in CD format.
- FYI: Radiology Nurses Day is the second Tuesday of April, every year.
- Christine Keough, BSN, RN, CRN, has been invited by SIR to serve on a task force that is developing a sterile procedure competence entitled Sterile Techniques in Interventional Radiology.
- Tim McSorley, BSN, RN, CRN, has been invited to be a member of the SIR Standards of Practice Committee.
- The Program Planning Committee is diligently working on the Fall Symposium and the 2009 Annual Convention. Watch the ARIN website for details.
- ARIN continues to donate to the Nurses House, a national fund for nurses in need.
For more information about the Nurses House, please go to www.NursesHouse.org.

The ARNA National Office sends out frequent e-mail communications with information relevant to your practice needs. Do we have your current e-mail address on file? If you have not received a recent e-mail communication from the National Office, please log onto the ARNA website and update your profile.

American Radiological Nurses Association
(ARNA)
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2008-2009

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ARNA Core Purpose
To foster the growth of nurses who advance the standard of care in the imaging environment.
Central Line Infections

Chris Cavanaugh, CRNI

October 2008 is right around the corner. Are you doing everything you can to prevent central line infections?

In August 2007, the Centers for Medicare and Medicaid Services (CMS) announced that as of October 1, 2008, they will no longer reimburse hospitals for various hospital-acquired conditions, including central line infections. This announcement put hospitals on alert and brought infection prevention to the forefront. Although hospitals may have been aware of the IHI guidelines and ways to prevent infection when placing central venous access devices, an infection was seen as a treatable complication. Now that CMS will stop reimbursing for treatment starting in October, prevention is more important than ever. The CDC in 2002 estimated the cost for one catheter-related blood stream infection to range from $34,508 to $56,000. These costs will have to be absorbed by the hospital starting October 1, unless we do something to prevent infections.

On December 12, 2006, the Institute for Healthcare Initiatives (IHI) started the “Save 5 Million Lives” Campaign. Their ambitious, but attainable, goal was to save five million lives by December 2008. Their plan was to encourage hospitals to institute bundles of interventions to prevent hospital acquired infections and injuries which will lead to a reduction of patient deaths. One of the major initiatives in this project is the “Central Line Bundle.” The IHI Central Line Bundle is a group of interventions that have been proven by research to reduce central line infections. Research done by Mermel et al. in 2000 found that 90% of catheter-related blood stream infections come from some type of central line. When grouped together, the net result is much more than the sum of the parts in preventing infections.

The IHI Central Line Bundle:
1) Scrupulous Hand Hygiene
2) Maximum Barrier Precautions
3) 2% Chlorhexidine Skin Prep
4) Proper Site Selection
5) Daily Assessment of Need

1) Scrupulous Hand Hygiene – This seems so simple, but surveillance may determine that it is an often skipped step. Hand washing or cleansing with an alcohol-based foam or gel must be done immediately prior to the procedure, every time, and repeated with each glove change. We must feel empowered and empower our patients to ask the question “Have you washed your hands?”

2) Maximum Barrier Precautions – For the inserter, this means cap (covering all the hair), gown, mask and sterile gloves; for the patient, a drape that covers from head to toe. The idea being the larger the drape, the larger the sterile field and, therefore, the less risk of contamination. Raad et al. showed the importance of maximum barrier precautions in preventing infections from insertion procedures, by a decrease of 6.3% in his study.

3) 2% Chlorhexidine Skin Prep – A swab with a combination of 2% chlorhexidine and alcohol is the most effective agent for cleansing the skin prior to a procedure. The disinfectant must have a long enough time to penetrate the layers of the skin. Different than how we use betadine, chlorhexidine is used in a back and forth scrubbing motion. Pressure is not needed, but friction is for the prep to be most effective. Going back and forth over the same area is encouraged, and the scrub should be a minimum of 30 seconds. A 3 mL swab can cover a 4 x 4 inch area without difficulty. It is important, also, to be sure the chlorhexidine prep dries completely prior to applying any dressing. The wet chlorhexidine can cause a skin reaction if it is trapped under a transparent dressing and not allowed to dry completely. When dry, chlorhexidine keeps working, killing skin bacteria for up to 48 hours.

4) Proper Site Selection – The CDC in 2002 recommended the subclavian as the site of choice for non-tunneled central line placement. This is due to the lower amount of skin flora in the area, and the ease of site care. The internal jugular vein is the next site choice, and many MDs still choose this site first due to a perceived lower risk of insertion complications versus the subclavian area. This challenge is met by MDs who use ultrasound to place their catheters. The femoral site should be used only in emergencies, and removed as soon as the patient is stable. The skin flora is heavy in this area, and it is a difficult site to maintain.

5) Daily Assessment of Need – this is the only piece of the bundle that addresses the line after it is placed. The longer a central line remains in place, and the more lumens it has, the higher the risk of infection for that patient. Central venous access lines should not be kept in place for “just-in-case” situations. Part of the communication between shifts should be this assessment of need for the patient’s central line. The idea is to move the patient to a peripheral IV as soon as all medications requiring central access have been stopped. Moving a patient from a subclavian central line to a PICC line does not solve the problem; it simply trades one central line for another. Maki, in 2005, found that PICC lines in the ICU have similar infection rates to subclavian or jugular central lines.

Well, October will be here before we know it. The leaves will turn colors, the cooler air settles in, and we will need to be vigilant in preventing catheter-related blood stream infections in our patients. It is no longer a treatable complication, but a preventable one. Not only is prevention of these infections in the best interests of our patients, but it also affects the economy and financial stability of our hospitals.
What’s Happening in Our Local Chapters

Grand Canyon State Chapter
Deborah Thomas, RN, BS, CRN
Secretary

This year marks the fifth anniversary of the Grand Canyon State Chapter. Our founding members continue to be active in all aspects of the chapter. August marks our fourth educational meeting of the year and will be held in Phoenix. We have offered over 14 CEU’s to our participants this year. Our Board of Directors will also meet in August for the annual strategic planning meeting. Goals include educational meetings in Tucson and Flagstaff and increasing the number of CEU’s offered at each program. We encourage technologists and physicians to support our mission and attend our meetings. Please contact us as azradiologyrn.net. We’d love to hear from you!

Philadelphia Chapter
Karen L. Green, MHA, BSN, RN, CRN
Immediate Past President, Philadelphia Chapter

The Philadelphia Chapter of ARNA hosted our 7th Annual May dinner to honor area imaging nurses for providing exceptional patient care. The event was held at Guido’s Italian Restaurant. Sixty-three individuals attended – including 54 radiology nurses, 5 technologists, 2 radiology administrators, and 2 vendor representatives. Dr. David Ball discussed Biliary Interventions – a topic and presentation style that was very well received.

The Philadelphia Chapter is grateful for the support from our vendor representation including Boston Scientific; Cook Medical, Inc.; Smith Medical; and Vascular Solutions.

2008-2009 board members were inducted. They are Betty Young, RN, President; Cindy Gould, RN, President-Elect; Patrick Glickman, RN, Treasurer; Ruth Cherry, RN, Secretary; Tim Mc Sorley, RN, Board Member; Karen McCabe, RN, Board Member; Barb Dulgosz, RN, Board Member; and Karen Green, RN, Immediate Past President. Congratulations to all!

Save the Date: The Philadelphia Chapter is sponsoring our 2nd Annual Fall Symposium to be held Saturday, November 8, 2008. We have a great program planned. Watch the ARNA Calendar of Events for details.

RNCB and CRN Credential

The Radiologic Nursing Certification Board, Inc., is a subsidiary of ARNA/ARIN. This is a volunteer, non-profit organization whose mission is to develop and administer a certification program in radiology nursing to candidates who meet the specified eligibility criteria. RNCB meets the mission by providing certification through examination and recertification by examination or recognition of continuing education credits.

Information about RNCB, the CRN certification/recertification process, and applications can be found on the ARNA website. Guidelines may be downloaded from the ARNA website for certification/recertification.

If you have questions anywhere in the process please contact RNCB by e-mail at rncb@dancymc.com or by telephone at (866) 486-2762 or (850) 474-7292 and ask to speak with Shay Stephens.
Message from the Nominating Committee

Kathy Scheffer, RN, MN, CRN
Immediate Past President, ARNA
Nominating Committee Chair

Can you believe that it is July already and the year is half over? Even though ARIN’s (ARNA’s) officers take office at our spring meeting (March), it’s time to start thinking about candidates for next year’s Board of Directors. As the immediate past president, it is my pleasure to serve as the chair of the Nominating Committee. It is the job of the committee to seek volunteers for officers, verify their eligibility, and present a ballot to the Board of Directors for approval. We are in the beginning stages of this process and are posting this article to have you start thinking about your fellow nurses and who would offer the best new leadership for ARIN for 2009.

This coming year, we will be soliciting nominations for president-elect, secretary, board member, and Nominating Committee member. Think about your local chapter leadership – or perhaps you’ve served on a committee or task force and enjoyed the experience and want to get more involved. This is a great opportunity to make a difference in your profession and also to have the ability to network with nurses from all over the country. We are enclosing the “willingness to serve/nomination” form with this newsletter to make it easier for you to volunteer.

My own experience started by serving first on the Membership Committee and then running for the Nominating Committee. From those beginnings, I gradually moved onto the board and up through the ranks to president.

The main qualifications are to be an active member of ARNA/ARIN for one year, have an active role or knowledge of radiology nursing, and have the time and resources to fulfill the responsibilities of the office. It is the committee’s mission to have a full slate of candidates from all geographic regions of the country represented. We are so much richer when we receive input on practice and clinical issues affecting all of us from across the nation.

So, it’s time to look around you, talk to your colleagues, and nominate or volunteer to run for office for your professional association. I guarantee you that it will be both a rewarding and professionally enriching experience. Just follow the directions on the enclosed nominating form and submit your name today!

Electronic Health Records

Kerry Weems, Acting Administrator, CMS

A new national Medicare demonstration program is aiming to show health care professionals the on-the-ground advantages of connecting to the information age.

Medicare is looking for 12 communities across the country that can bring together a broad cross-section of community leadership, leverage resources, and recruit small and medium-sized primary care physician practices willing to provide the evidence that electronic health records (EHR) can improve the quality of patient care.

As many as 1,200 physician practices nationwide could be eligible for incentive payments of up to $58,000 per physician – up to $290,000 per practice – over the five-year life of the demonstration. Incentives would be based on a practice’s level of EHR use, and for reporting and performance on 26 clinical quality measures.

But the rewards of joining are much more than financial. An entire community can benefit from the use of EHRs, which can help avoid drug interactions, redundant lab and diagnostic tests – meaning fewer medical errors and potentially lower costs. Medicare plans to announce the winning communities in June, 2008.

There is no question that interoperable EHRs will be a key part of the healthcare landscape in the future. Medicare’s objective, with this demonstration, is to launch the construction of an interconnected electronic information system quickly and seamlessly. The challenge before us is not whether to move forward to improve health care quality through the secure exchange of medical information, but how to accomplish this most effectively.

To learn more about the new EHR demonstration project, visit: http://www.cms.hhs.gov/DemoProjectsEvalRpts/downloads/2008_Electronic_Health_Records_Demonstration.pdf. Email EHR_Demo@cms.hhs.gov or EHR_Demo_community-selections@cms.hhs.gov for more information about community selection.

Kerry N. Weems is the Acting Administrator of the Centers for Medicare & Medicaid Services, part of the U.S. Department of Health and Human Services.
Joint Commission Announces 2009 Patient Safety Goals

Lisa J. Revay, RN, CRN

The Joint Commission announced the 2009 National Patient Safety Goals on June 17, 2008. The National Patient Safety Goals promote specific improvements in patient safety by providing healthcare organizations with proven solutions to persistent patient safety problems. Major changes for 2009 include three new hospital and critical access hospital requirements related to preventing deadly health care-associated infections due to multiple drug-resistant organisms (MDROs), central line-associated bloodstream infections and surgical site infections. These additions build on the existing goals to reduce the risk of health care associated infections and recognize that patients continue to acquire preventable infections at alarming rates. Below are additions of particular interest in radiology.

NPSG.07.04.01 (Hospital) is a goal to implement best practices or evidence-based guidelines to prevent central line-associated bloodstream infections. This requirement covers short and long term central venous catheters and peripherally inserted central catheter lines. The following is outlined in the goal:

As of April 1, 2009, the hospital’s leadership has assigned responsibility for oversight and coordination of the development, testing and implementation of NPSG.07.04.01.
As of July 1, 2009, an implementation work plan is in place that identifies adequate resources, assigned accountabilities, and a time line for full implementation of NPSG.07.04.01 by January 1, 2010.
As of October 1, 2009, pilot testing in at least one clinical unit is under way, for the requirements in NPSG.07.04.01.
As of January 1, 2010, the elements of performance in NPSG.07.04.01 are fully implemented across the hospital.
As of January 1, 2010: The hospital educates health care workers who are involved in these procedures about health care associated infections, central line-associated bloodstream infections, and the importance of prevention. Education occurs upon hire, annually thereafter, and when involvement in these procedures is added to an individual’s job responsibility.
As of January 1, 2010: Prior to insertion of a central venous catheter, the hospital educates patients, and their families as needed, about central line-associated bloodstream infection prevention.
As of January, 2010: The hospital implements policies and practices aimed at reducing the risk of central line-associated bloodstream infections that meet regulatory requirements and are aligned with evidence-based standards (for example, the Centers for Disease Control and Prevention (CDC) and/or professional organization guidelines).
As of January 1, 2010: The hospital conducts periodic risk assessments for surgical site infections, measures central line-associated bloodstream infection rates, monitors compliance with best practices or evidence-based guidelines, and evaluates the effectiveness of prevention efforts.
As of January 1, 2010: The hospital provides central line-associated bloodstream infections rate data and prevention outcome measures to key stakeholders including leaders, licensed independent practitioners, nursing staff, and other clinicians.
As of January 1, 2010: Use a catheter checklist and a standard protocol for central venous catheter insertion.
As of January 1, 2010: Perform hand hygiene prior to catheter insertion or manipulation.
As of January 1, 2010: For adult patients, do not insert catheters into the femoral vein unless other sites are unavailable.
As of January 1, 2010: Use a standardized supply cart or kit that is all inclusive for the insertion of central venous catheters.
As of January 1, 2010: Use a standardized protocol for maximum sterile barrier precaution during central venous catheter insertion.
As of January 1, 2010: Use a chlorhexidine-based antiseptic for skin preparation during central venous catheter insertion inpatients over two months of age, unless contraindicated.
As of January 1, 2010: Use a standardized protocol to disinfect catheter hubs and injection ports before accessing the ports.
As of January 1, 2010: Evaluate all central venous catheters routinely and remove nonessential catheters.

The above goals also apply to Ambulatory Health Care with the exclusion of 10-15.

Also of interest is NPSG.08.04.01. In settings where medication is used minimally, or prescribed for a short duration, modified medication reconciliation processes are performed. The rationale is a number of patient care settings exist in which medications are not used, are used minimally, or prescribed for only a short duration. This includes outpatient radiology. In these settings, obtaining a list of the patient’s original, known, and current medications that he or she is taking at home is still important; however, obtaining information on the dose, route, and frequency of use is not required.

Resource: http://www.jointcommission.org
Liaison Report

Charleen Peterson

I would like to thank ARNA and the members for allowing me the privilege to serve as the liaison to the American Stroke Association for 2007-2008. Over the course of the year, I have learned a lot about the process of how we treat patients experiencing strokes in the radiology setting. Our interventions are based on clinical trials, which many of us are involved in when caring for a stroke patient. As the liaison, I made it my goal to research and report the latest clinical recommendations from the American Stroke Association.

AHA/ASA GUIDELINE

The American Heart Association and the American Stroke Association have guidelines for the management of ischemic stroke and intracerebral hemorrhage. The guidelines have been updated in 2007 and are available at http://www.strokeaha.org. Changes to the guidelines and additions that may affect our practice include the following:

Ischemic Stroke
- Monitor for angioedema that may cause airway obstruction with IV tPA
- Intra-arterial thrombolysis for patients who are not IV tPA candidates who have major stroke of < 6 hours due to MCA occlusion
- IA tPA for non IV tPA candidates, such as recent surgery
- In exceptional cases, vasopressors may be used to improve cerebral blood flow. Close neurological and cardiac monitoring is recommended.
- ASA recognizes the MERCI device as a reasonable intervention for extraction of intra-arterial thrombi in carefully selected patients.

Intracerebral Hemorrhage
- Antipyretic medications should be administered to lower temperature in febrile patients with stroke.
- Protamine Sulfate should be used to reverse heparin-associated ICH, with the dose depending on the time from cessation of heparin.
- Patients with warfarin-associated ICH should be treated with IV vitamin K to reverse the effects of warfarin and with treatment to replace clotting factors.
- Treatment of patients with ICH related to thrombolytic therapy includes urgent empirical therapies to replace clotting factors and platelets.

Table 1 Titratable Agents for Hypertension

<table>
<thead>
<tr>
<th>DRUG</th>
<th>MECHANISM</th>
<th>DOSE</th>
<th>ONSET</th>
<th>CONSIDERATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nicardipine</td>
<td>L-type CCB</td>
<td>5-15 mg/hr infusion</td>
<td>5-10 minutes</td>
<td>Start @ 5 mg/hr then wait 5 min before titrating. Easy</td>
</tr>
<tr>
<td>Labetalol</td>
<td>•1, •1, •2 antagonist</td>
<td>10-80 mg bolus every 10 min, up to 300 mg; 0.5-2 mg/min infusion</td>
<td>5-10 minutes</td>
<td>Start with 10 mg bolus then wait. Can always give more if needed.</td>
</tr>
<tr>
<td>Esmolol</td>
<td>•1 antagonist</td>
<td>500 µg/kg bolus, 50-300 µg/kg/min infusion</td>
<td>1-2 minutes</td>
<td>Bolus then infuse, easily titrated. Predictable. Easy on/off</td>
</tr>
<tr>
<td>Enalapril</td>
<td>ACE inhibitor</td>
<td>0.625 mg bolus, then 1.25-5 mg boluses every 6 hours</td>
<td>15-30 minutes</td>
<td>Not an infusion. Less control over blood pressure. Slow control; but effective</td>
</tr>
<tr>
<td>Nitroprusside</td>
<td>Nitrate</td>
<td>0.5-8 mcg/kg/min</td>
<td>1-2 minutes</td>
<td>Very powerful. Dilates brain vessels, increasing ICP and decreasing CPP. Protect from light</td>
</tr>
</tbody>
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(continued on page 9)
BLOOD PRESSURE MANAGEMENT

Arthur M. Pancioli, MD, FAHA, from the University of Cincinnati gave a dynamic lecture on “Blood Pressure and Stroke” at the Stroke 2008 conference. He described how current drug choices and management is based on physician consensus.

- **Intracerebral Hemorrhage** – keep MAP (mean arterial pressure) less than 130 mmHg and greater than 70 mmHg
- **Subarachnoid Hemorrhage** – keep MAP less than 130 mmHg and greater than 70 mmHg, and Systolic blood pressure less than 160 mmHg
- **Acute Ischemic Stroke** – elevated blood pressure is the body’s natural response to perfuse the brain. Only lower blood pressure when Systolic blood pressure is above 220 mmHg or Diastolic is above 120 mmHg. When giving tPA it is imperative that Systolic blood pressure be below 185 mmHg and Diastolic below 110 mmHg to prevent increased risk of cerebral hemorrhage.

If we must lower blood pressure, there are three factors when selecting a drug: predictability, speed of onset, and ease of use. See Table 1.

Other considerations include recognizing the correlation between blood pressure and neurological symptoms and the use of titrate agents to optimize neurological function and maintain blood pressure parameters. Elderly patients may be dehydrated and require extra IV fluids (avoiding dextrose). Finally, remember low blood pressure may be more dangerous than high blood pressure. Dr. Pancioli quoted 1.9 million neurons die every minute during a stroke when the brain in hypoperfused.

GLUCOSE MANAGEMENT

Glucose management was a hot topic at the conference this year as randomized trials are ongoing. A few different studies were referenced and from those there are some things we do know. We know that elevated glucose levels correlate with increased operative mortality and increased length of stay by 1-3 days, and it is the fourth greatest co-morbidity in hospitalized patients. We also know that increased glucose can increase risk of ICH, increase brain edema, and contribute to a leaky blood-brain barrier. Some conclusions were drawn from what we do know. Dr. Coplin of Wayne State University recommends glucose control begins within 12 hours of onset and achieves control within 5 hours.

ASA Guidelines
- Ischemic stroke: persistent hyperglycemia in the first 24 hours is associated with poor outcomes. Minimum threshold has been decreased to 140-185 mg/dL. Goal is normoglycemia.
- Intracerebral Hemorrhage: treat markedly elevated glucose levels of >300. Randomized trials are being tested for more aggressive lowering of hyperglycemia in the presence of ICH.

In conclusion, our role as a radiology nurse is growing rapidly in the area of interventional stroke treatment. Staying current on the ASA stroke guidelines ensures that we are providing the safest, best evidence-based practice to our patients when in our suites.

Linda Strangio Editor’s Award Winners

The Linda Strangio Editor’s Award was presented to Maria A. Smith, DSN, RN, CCRN, COI, Professor, School of Nursing, Middle Tennessee State University, Murfreesboro, TN; Marcia Pugh, MSN, MBA/HCM, RN, Division Director, Grants, Research & Outreach of West Alabama, Demopolis, AL; and Leigh Ann McInnes, PhD, RN, APRN-BC, Associate Professor, School of Nursing, Middle Tennessee State University, Murfreesboro, TN, for their article “Antibiotic Use in Interventional Radiology: A Nursing Perspective” that appeared in the June 2007 issue of the Journal of Radiology Nursing. The award was presented at the 2008 American Radiological Nurses Association Annual Convention in Washington, DC.

This award is named in honor of Linda Strangio, past editor of Images (former name of the Journal of Radiology Nursing), for her contributions to ARNA and radiology nursing. The award recognizes authors whose articles contribute to the body of radiology nursing knowledge and demonstrate excellence in writing. All feature articles published in the Journal of Radiology Nursing during the calendar year are eligible for the Linda Strangio Editor’s Award.

Congratulations, Maria, Marcia, and Leigh Ann!
ARNA First Survey Results

Chris Keough, BSN, RN, CRN
ARNA Board Member

The ARNA Board is very interested in meeting the needs of the members, nurses who work in the field of imaging. In March 2008, ARNA conducted the first online survey of members seeking their feedback on questions posed. Survey Monkey, the program used for the survey, collects the responses, analyzes the results, and provides a summary of the results by the number of respondents and by percentage of responses. The results of ARNA's first online survey were positive. There were 129 people who participated in the survey. The summary of the survey is as follows:

**Question #1) How many years have you worked in the radiology specialty?**
41.9% responded more than 10 years, 23.3% 5-7 years, 19.4% 3-4 years, 10.9% 8-10 years, 3.1% 1-2 years & 2.3% less than 1 year.

**Question #2) How many years have you been a member of ARNA?**
25.6% responded 3-4 years, 18.6% 1-2 years, 16.3% 5-7 years, 14.0% less than 1 year, 10.9% 8-10 years and 14.7% more than 10 years.

**Question #3) Have you registered to participate on the ARNA listserv?**
59.7% responded NO and 40.3% responded YES

**Question #4) Have you found the ARNA listserv helpful?**
62.0% responded does not apply, 32.6% responded YES, and 5.4% responded NO

**Question #5) Have you attended an ARNA Convention or Fall Symposium?**
76.0% responded YES and 24.0% responded NO

**Question #6) If you attended an ARNA Convention or Fall Symposium, how has the meeting been funded?**
38.8% paid by self, 33.3% hospital/facility paid, 31.0% Radiology department paid and 2.3% local chapter paid the cost.

**Question #7) What is the name of the department you work in?**
47.3% responded Radiology and 22.5% responded Imaging and 34.1% responded Other.

**Question #8) Has the name of your department in your facility changed recently?**
85.3% responded NO and 14.7% responded YES

**Question #9) ARNA will conduct a drawing to award prizes to members that have responded to this survey. If you would like to be entered into the drawing please include your email address below.**
96.8% responded YES, please enter me in the drawing, and 3.2% responded NO.

The ARNA Board is planning on developing a second survey which will be focused on educational preferences of the members. Please take a few minutes to participate in the online survey. Remember, your voice does count. ARNA will continue to evolve into the “voice of imaging nursing” and setting the standards of nursing care in the imaging environment.

New Certified Radiologic Nurses (continued from page 11)

Barbara J. Wilkinson
Lakeland, FL

Robin A. Williams
Wilmington, NY

Cynthia M. Williams-Queen
Owings Mills, MD

Susan A. Wills
Jacksonville, FL

Eileen M. Wolper
Belfast, ME

Ferdinand I. Yadou
Chino Hills, CA